Emily Roebling

LINKED CHALLENGE

To build a bridge between two supports that will hold 50g

ACTIVITY OVERVIEW

Two groups with two different sets of equipment (see resources list).

Activity leader to encourage children to explore different masses: 10g, 20g, 50g.

Activity leader to set initial challenge for children and let them explore the equipment. Children reminded they can decide to ask for a 'top tip' as a group if they find the challenge difficult. Activity leader to then determine how much of a pointer the group needs to get on track. *Building the bridge between two tables will make this easier.

When testing as a group, activity leader to begin with the smallest mass and work upwards to test the strength of the bridge.

KEY FACTS/SCIENCE

Bridges are built to cross an area without blocking the way underneath; for example, a stretch of water or a road. There are many different types of bridges, built for different specifications. *Check out the QR code for more information.

The Brooklyn Bridge is a suspension bridge. This is a bridge that has towers to which are attached cables, as well as anchors at either side of the deck. This allows the forces on the bridge to spread out, creating tension in the cables and pushing down through the towers.

A beam bridge is the simplest bridge. The deck (the beam) rests across supports at each end. This is the type that children will be most likely to make.

https://www.youtube.com/watch?v=oVOnRPefcno

RESOURCES

GROUP 1	GROUP 2
Newspaper	Garden canes
Cardboard	Lollipop sticks
Paperclips	

GENERAL RESOURCES

10g, 20g and 50g masses

Sticky tape

Scissors

QUESTIONS/FURTHER LEARNING

- Which is the strongest bridge?
- How do the materials used effect how much the bridge can hold?
- How could you improve your bridge?
- What different types of bridges are there?